AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

COMPLETE LISTING OF CLAIMS:

Claims 1-43   :   (Canceled)

Claim 44   :   (New)   A method of monitoring a status of network elements (NEs) linked together in a telecommunication network, comprising the steps of:

    a)   receiving a down status notification from a NE in the network;

    b)   identifying at least one other NE which is linked to the NE; and

    c)   polling one of the NE and the at least one other NE to determine the status thereof.

Claim 45   :   (New)   The method according to claim 44, in which the status of the NE is operational.

Claim 46   :   (New)   The method according to claim 44, in which the status of the NE is non-operational.

Claim 47   :   (New)   The method according to claim 44, in which the down status notification is received from the NE if the NE determines that the status of the at least one other NE linked thereto is non-operational.

Claim 48   :   (New)   The method according to claim 47, in which each NE polls the one of the NE and the at least one other NE linked thereto to determine the status of the at least one other NE.

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Claim 49 : (New) The method according to claim 48, in which each NE polls the one of the NE and the at least one other NE linked thereto by signaling to the at least one other NE, using a signaling protocol.

Claim 50 : (New) The method according to claim 48, in which, if the one of the NE and the at least one other NE replies, its status is considered to be operational.

Claim 51 : (New) The method according to claim 48, in which, if the one of the NE and the at least one other NE does not reply, its status is considered to be non-operational.

Claim 52 : (New) The method according to claim 44, in which the down status notification contains information on the NE which has output the notification.

Claim 53 : (New) The method according to claim 44, in which the down status notification is received from a NE if the NE determines that the status of an interface thereof linked to at least one other NE is non-operational.

Claim 54 : (New) The method according to claim 53, in which the status of the interface is non-operational if the status of the one of the NE and the at least one other NE linked to the interface is non-operational.

Claim 55 : (New) The method according to claim 53, in which the down status notification contains information on the NE which has output the notification, and information on the interface of the NE which is non-operational.

Claim 56 : (New) The method according to claim 53, in which the interface comprises a hardware port, and the down status notification comprises a hardware port down trap.

Claim 57   :   (New)   The method according to claim 44, in which the down status notification is received using a signaling protocol.

Claim 58   :   (New)   The method according to claim 57, in which the signaling protocol comprises a simple network management protocol (SNMP).

Claim 59   :   (New)   The method according to claim 44, in which the identifying step comprises accessing the down status notification to obtain information on the NE which has output the notification.

Claim 60   :   (New)   The method according to claim 59, in which the identifying step comprises accessing a links database containing details of each NE and the at least one other NE linked thereto, and using the information to obtain the identification of the one of the NE and the at least one other NE.

Claim 61   :   (New)   The method according to claim 60, in which the identifying step comprises accessing the links database and using the information to obtain an internet protocol (IP) address of the one of the NE at the at least one other NE.

Claim 62   :   (New)   The method according to claim 44, in which the polling step comprises sending at least one simple network management protocol (SNMP) get request to the NE.

Claim 63   :   (New)   The method according to claim 62, in which the polling step comprises using the SNMP over transmission control protocol/internet protocol (TCP/IP).

Claim 64   :   (New)   The method according to claim 44, and using a network management system (NMS) of the telecommunication network.

Claim 65 : (New) The method according to claim 64, in which the NMS comprises a fault manager module.

Claim 66 : (New) The method according to claim 65, in which the fault manager module receives the down status notification from the NE.

Claim 67 : (New) The method according to claim 66, in which the fault manager module places the down status notification in a notification database of the NMS.

Claim 68 : (New) The method according to claim 66, in which the fault manager module outputs a message on receipt of the down status notification.

Claim 69 : (New) The method according to claim 68, in which the NMS comprises a monitoring module.

Claim 70 : (New) The method according to claim 69, in which the monitoring module receives a message output from the fault manager module when it receives the down status notification.

Claim 71 : (New) The method according to claim 70, in which the monitoring module accesses the down status notification, to obtain information on the NE which has output the notification.

Claim 72 : (New) The method according to claim 71, in which the monitoring module accesses a links database of the NMS containing details of each NE and the at least one other NE linked thereto, and uses the information to obtain the identification of one of the NE and each other NE.

Claim 73 : (New) The method according to claim 72, in which the monitoring module polls one of the NE and each other NE to determine the status thereof.

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Claim 74 : (New) The method according to claim 73, in which the monitoring module determines the status of at least one NE of the network, and adds status information to a status database of the NMS.

Claim 75 : (New) The method according to claim 64, in which the NMS comprises a graphical user interface (GUI) module.

Claim 76 : (New) The method according to claim 75, in which the GUI module is used to report the status of one of the NE and the at least one other NE of the network to a customer of the network.

Claim 77 : (New) The method according to claim 44, in which the NEs in the telecommunication network comprise nodes, switches and routers.

Claim 78 : (New) A computer program product for monitoring a status of network elements (NEs) linked together in a telecommunication network, comprising:

a) computer readable program means for receiving a down status notification from a NE of the network;

b) computer readable program means for identifying at least one other NE which is linked to the NE; and

c) computer readable program means for polling one of the NE and the at least one other NE to determine the status thereof.

Claim 79 : (New) The computer program product according to claim 78, comprised in a network management system (NMS) of the telecommunication network.

Claim 80 : (New) The computer program product according to claim 79, in which the computer readable program means for receiving the down status notification from the NE of the network comprises a fault manager module of the NMS.

Claim 81 : (New) The computer program product according to claim 79, in which the computer readable program means for identifying the at least one other NE which is linked to the NE comprises a monitoring module of the NMS.

Claim 82 : (New) The computer program product according to claim 81, in which the computer readable program means for polling comprises the monitoring module of the NMS.

Claim 83 : (New) A computer system in which a status of network elements (NEs) linked together in a telecommunication network is monitored, comprising:

a) receiving means for receiving a down status notification from a NE of the network;

b) identification means for identifying at least one other NE which is linked to the NE; and

c) polling means for polling one of the NE and the at least one other NE to determine the status thereof.

Claim 84 : (New) A computer system whose operation is directed by the computer program product according to claim 78.

Claim 85 : (New) A computer readable medium on which is stored a computer program of instructions for a computer system which monitors a status of network elements (NEs) linked together in a telecommunication network, comprising:

a) means for receiving a down status notification from a NE of the network;

b) means for identifying at least one other NE which is linked to the NE; and

c) means for polling one of the NE and the at least one other NE to determine the status thereof.

Claim 86 : (New) A program storage device readable by a machine and encoding a program of instructions for executing the method according to claim 44.